

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.yy**DAILY PROJECT JOURNAL****Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Report No:** DPJ-000045**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Dated:** 16-Jan-2007**Location:** Changxing Island, Shanghai, China

Submittals(New / Total): **CWR's:** 0 / 0 **HSR's:** 0 / 0 **NCR's:** 0 / 1

Item	Title	Detail
1	Major component movement	<p>QA review RT film on the following PQR test plates:</p> <p>HP-2006116 60mm performed with Iridium 192 (view 2 missing one location marker, however since QA witnessed the testing and could confirm the set-up the film was deemed acceptable)</p> <p>HP-2006117-2 60mm performed with Iridium 192</p> <p>HP-2006128 75mm performed with Cobalt 60</p> <p>HP-2006133 75mm performed with Cobalt 60</p> <p>The welds appeared to comply with the contract documents.</p> <p>QA observed the following mechanical testing:</p> <p>HP-2006136-1 testing appeared to comply</p> <p>HP-2006137 finished Charpy-V notch testing. Testing appeared to comply.</p> <p>HP-2006126 macro-etches - multiple pass fillet weld was unacceptable due to lack of fusion.</p> <p>Conducted welding of the following PQR test plates:</p> <p>2F FCAW procedure qualification identified as HP-2006126 on HPS-485 material. The test was unacceptable due to welding outside of the parameters qualified by supporting PQR HP-2006120.</p> <p>2F FCAW procedure qualification identified as HP-2006126-1 on HPS-485 material. Welding appears to comply, however the Macro-etch samples revealed lack of penetration on the multiple pass fillet weld.</p>
2	Key conversations	<p>QA spoke with Moody International CWI Zhou Daqing regarding the discrepancies noted during observations of the welder qualifications. Mr. Zhou then stated that the welder qualifications are not being performed for Caltrans, but for a different project. Mr. Zhou also stated that the E7015 SMAW electrode was better than E7018. QA explained that welder</p>

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qualifications must be performed in accordance with AWS D1.5 using procedures and electrodes which comply with the code. QA stated that the E7015 electrode package did not state the electrode was "certified" to AWS/ASTM/ASME A5.1 or A5.2. Mr. Zhou stated that in the electrode manufactures technical data on the electrode it stated that the electrode was "equivalent" to A5.1 or A5.5. QA stated that the electrode must be "certified" and that the manufacturer stating the electrode was "equivalent" was not sufficient to satisfy the code requirement for electrodes.

3 Other important observations

Caltrans Engineer Jim Merrill along with ABF representative Craig Knops and ZPMC Engineers Chen Bin and Wu Yun traveled to the Zhang Jiang Base Machine Shop to perform an audit of the facility. The machines and facilities appear to be acceptable, however they still working on their fabrication plan and logistics.

QA traveled to Jin Tong Jian Chen NDT to observed radiographic testing of test plates HP-2006116, HP-2006117-2, HP-2006128 and HP-2006133. QA observed the NDT company use Iridium 192 for the 60mm plates and Cobalt 60 for the 75mm plates. QA had been under the impression previously that the company did not possess an Iridium source.

QA traveled to another ZPMC base on Changxing Island to observed welder qualifications being conducted by Moody International. Upon arrival ZPMC informed QA that they were currently performing SMAW, FCAW and SAW qualifications. QA observed the following discrepancies: FCAW - wire size was other than that listed in the WPS submitted to Caltrans, and QA observed the interpass temperature to be greater than 260C (500F).

SAW - the electrode and flux was other than that listed in the WPS submitted to Caltrans and not that listed in AWS D1.5.

SMAW - the electrode was other than that listed in the WPS submitted to Caltrans. In addition the electrode being used was a Chinese brand E7015 electrode that is not certified to AWS/ASTM/ASME A5.1 or A5.2.

4 Quality Assurance Inspectors per shift

4 AM (3 at Changxing Island Base / 1 at Jin Tong Jian Chen NDT Co, Ltd, Shanghai)
0 PM

Inspected By: McClary,David

Quality Assurance Inspector

Reviewed By: Lowry,Patrick

QA Reviewer
